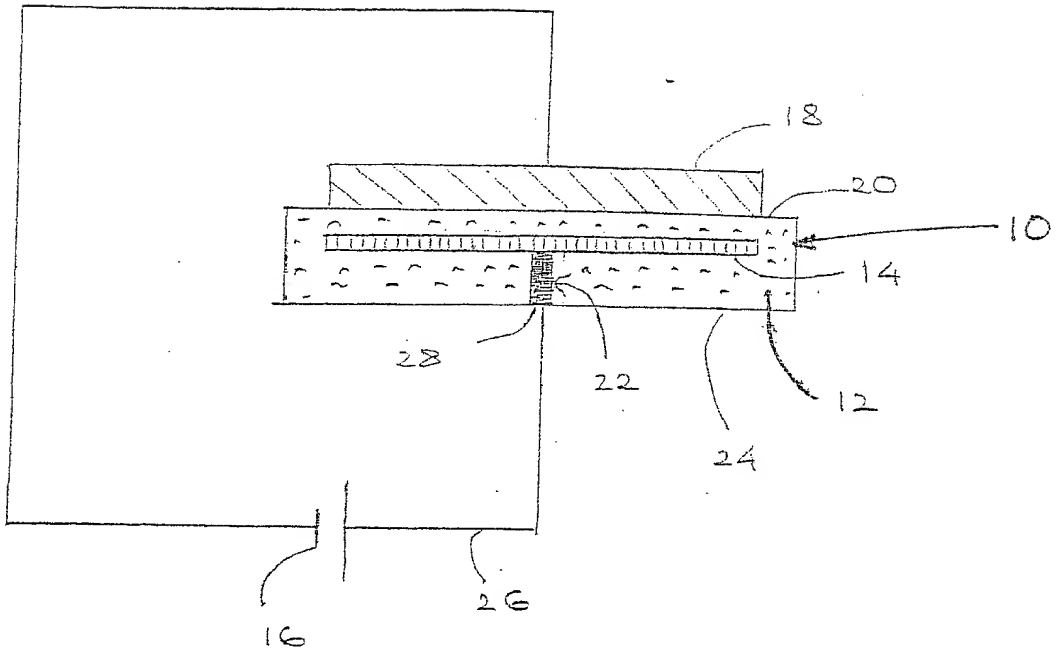
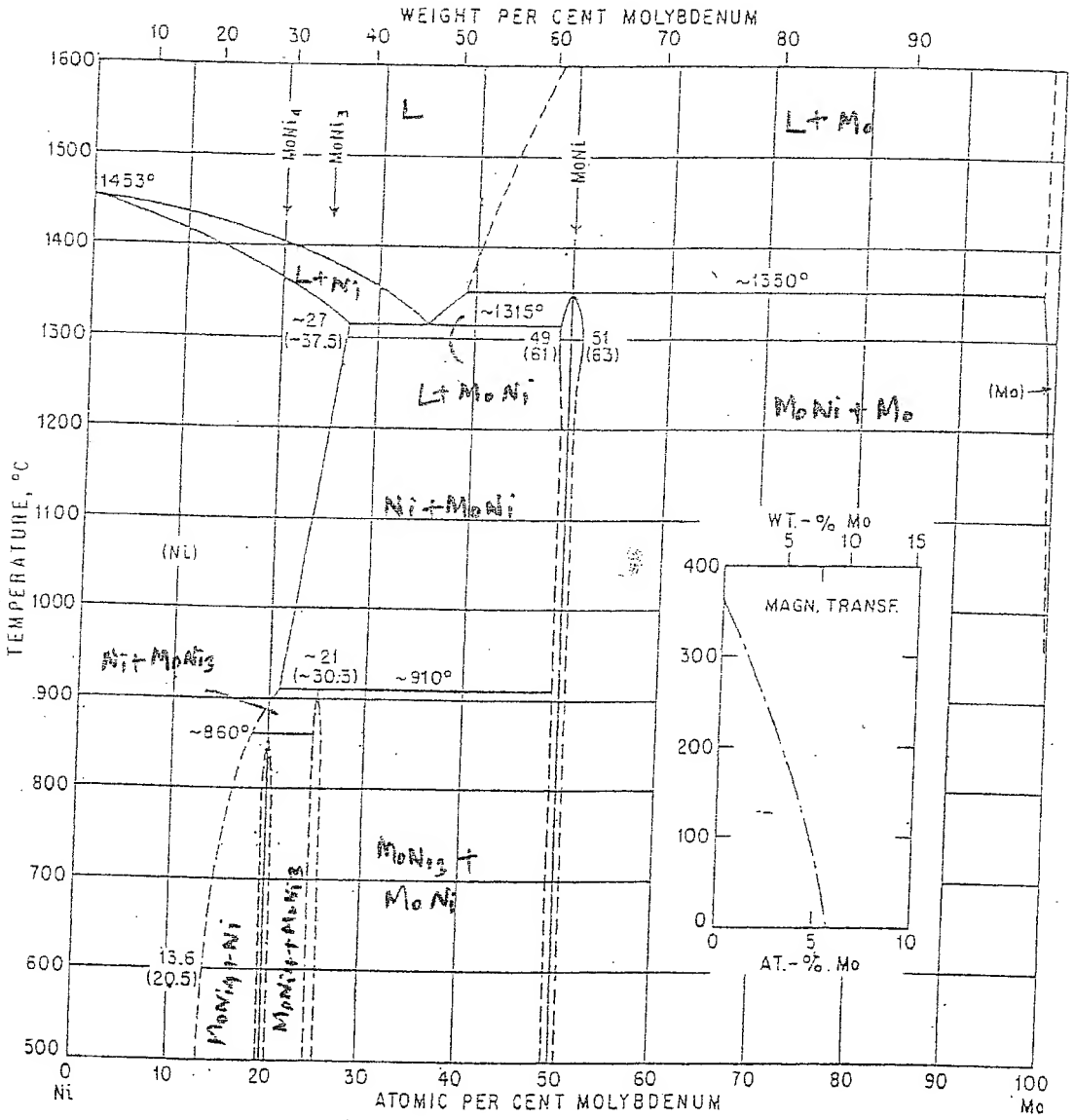


FIGURE 1

FIGURE 2


WEIGHT PER CENT MOLYBDENUM
ATOMIC PER CENT MOLYBDENUM
TEMPERATURE, °C
Ni
Mo
L
L + Mo
L + Ni
L + Mo Ni
Mo Ni + Mo
Ni + Mo Ni
Ni + Mo Ni3
Mo Ni3 + Mo Ni
MoNi4
MoNi3
MoNi
1453°
~1350°
~1315°
~910°
~860°
~27
(~37.5)
49
(61)
51
(63)
~21
(~30.5)
13.6
(20.5)
(Ni)
(Mo)
WT.-% Mo
AT.-%. Mo
MAGN. TRANSF.

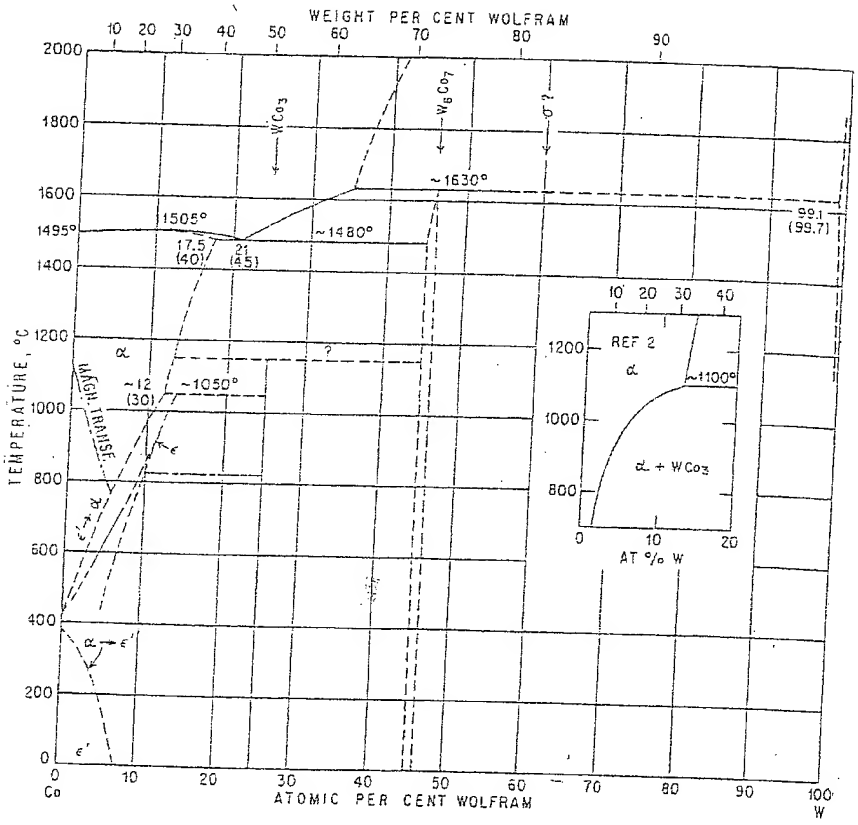

WEIGHT PER CENT WOLFRAM
10 20 30 40 50 60 70 80 90
2000
1800
1600
1495°
1400
1200
1000
800
600
400
200
0
TEMPERATURE, °C
WCo3
W6Co7
σ ?
~1630°
1505°
~1480°
17.5 (40)
21 (45)
99.1 (99.7)
α
?
~12 (30)
~1050°
HIGH TRANSF.
ε
α + ε
α + ε'
ε'
0 Co
10 20 30 40 50 60 70 80 90 100 W
ATOMIC PER CENT WOLFRAM
10 20 30 40
1200
1000
800
REF 2
α
~1100°
α + WCo3
0 10 20
AT % W

FIGURE 3

FIGURE 4

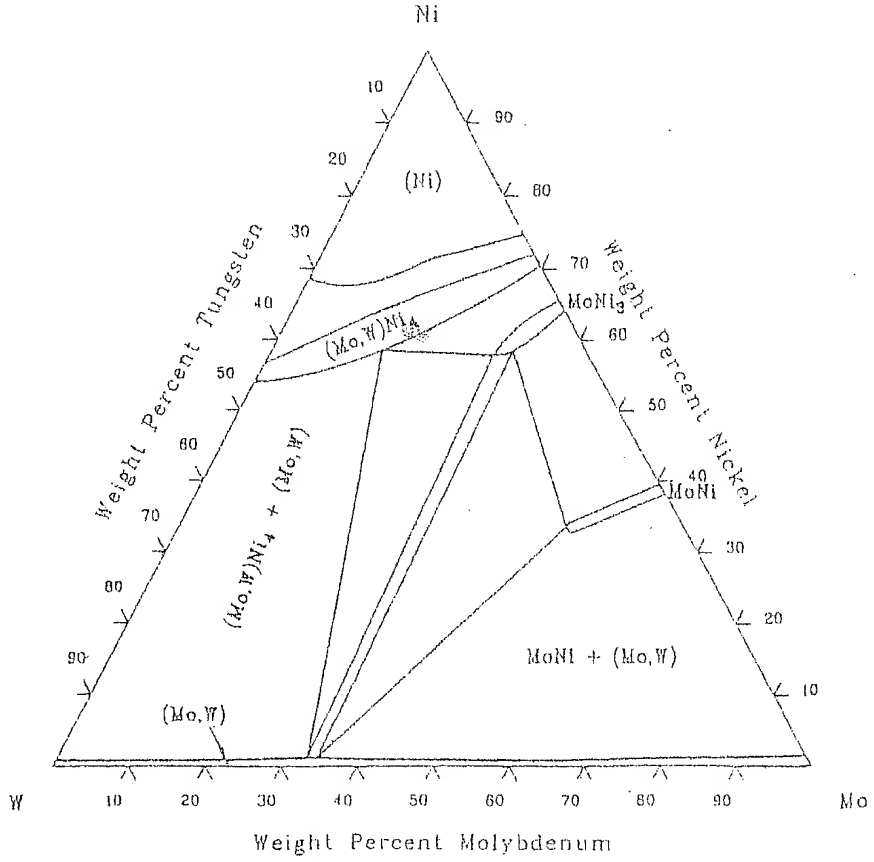

Ni
(Ni)
(Mo,W)Ni4
MoNi3
MoNi
(Mo,W)Ni4 + (Mo,W)
MoNi + (Mo,W)
(Mo,W)
Weight Percent Tungsten
Weight Percent Nickel
W
Mo
10
20
30
40
50
60
70
80
90
Weight Percent Molybdenum

FIGURE 5

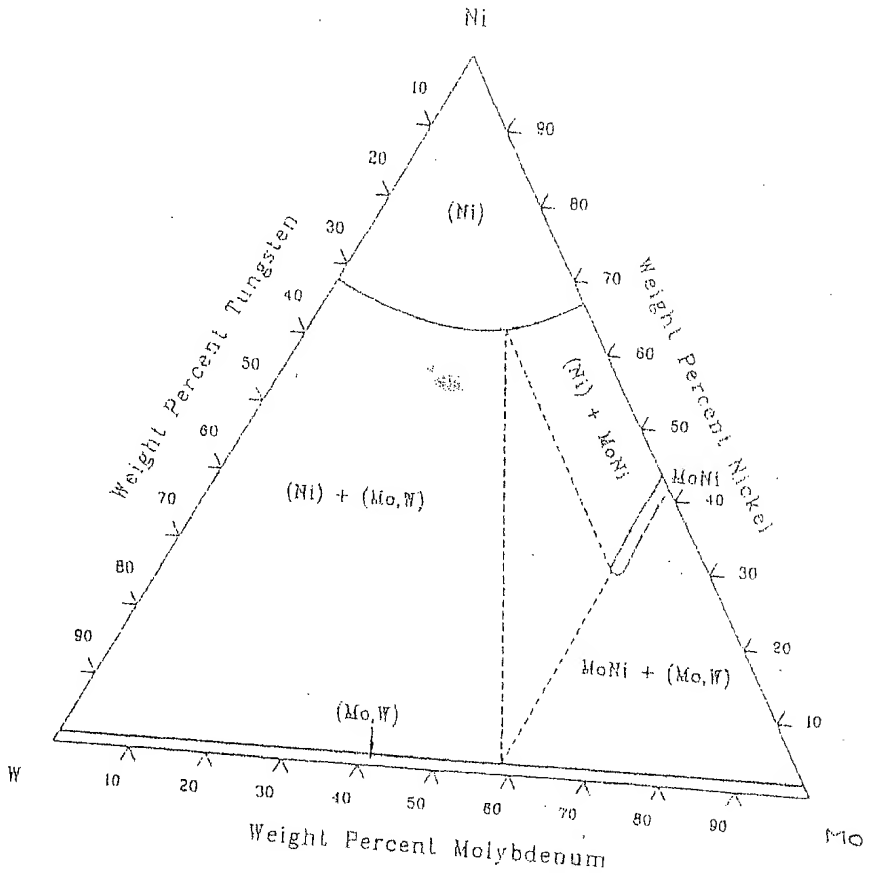

Ni
10
20
30
40
50
60
70
80
90
(Ni)
(Ni) + MoNi
(Ni) + (Mo,W)
MoNi
MoNi + (Mo,W)
(Mo,W)
Weight Percent Tungsten
Weight Percent Nickel
W
Mo
Weight Percent Molybdenum

FIGURE 6

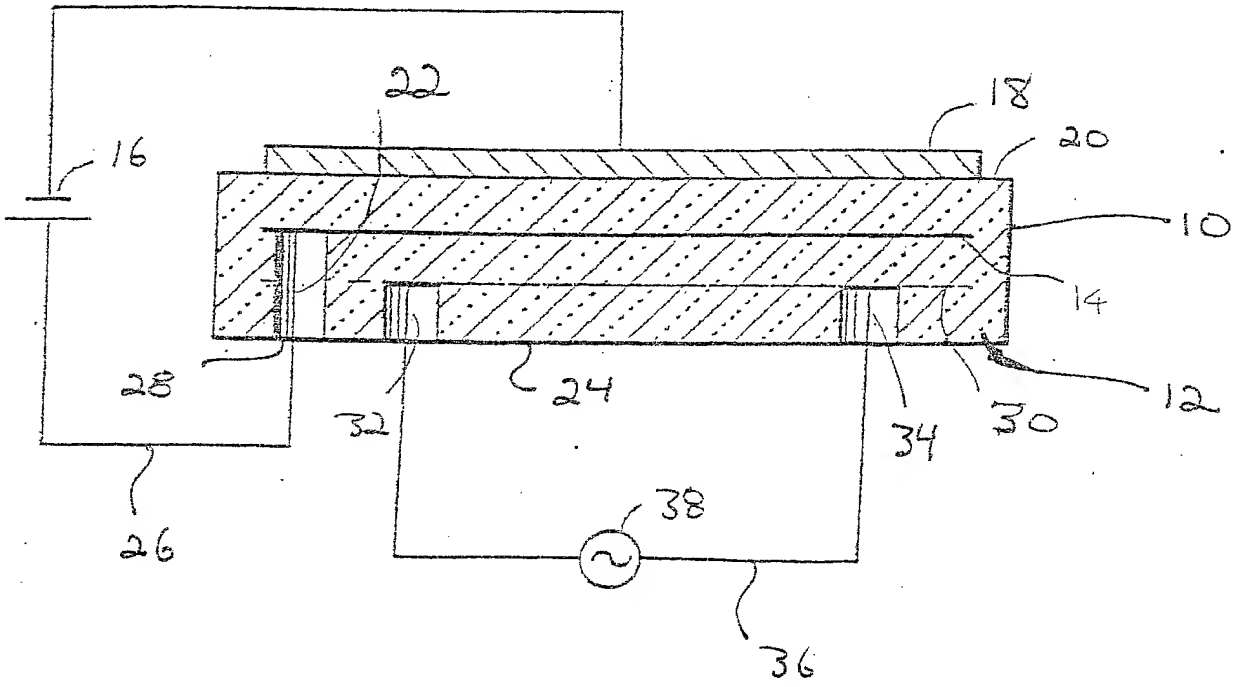


FIGURE 7A

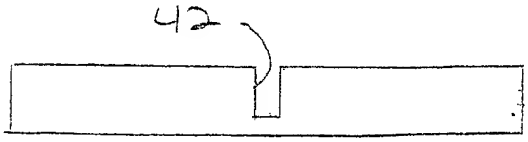


FIGURE 7B

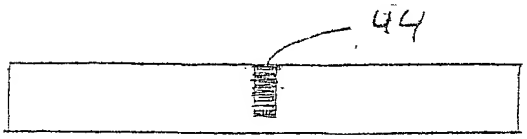


FIGURE 7C

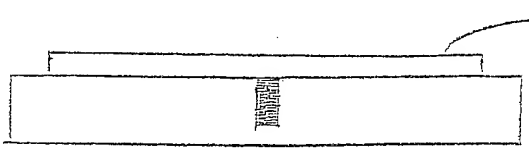


FIGURE 7D

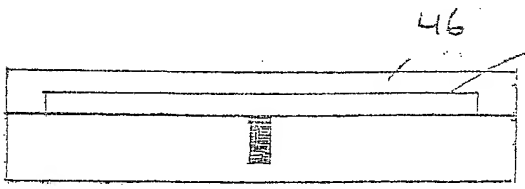


FIGURE 7E

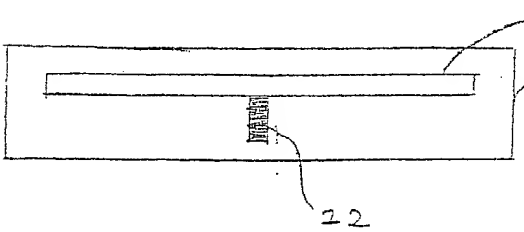


FIGURE 7F

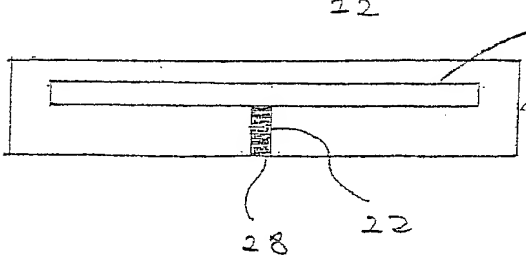


FIGURE 7G

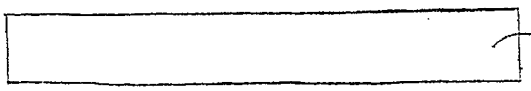


FIGURE 8A

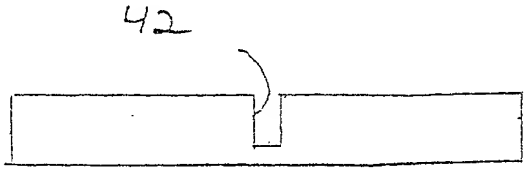


FIGURE 8B

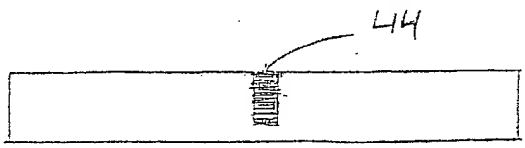


FIGURE 8C

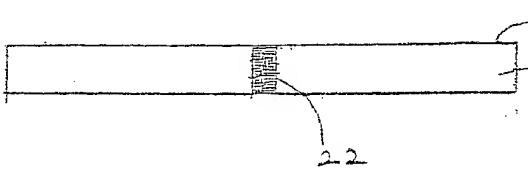


FIGURE 8D

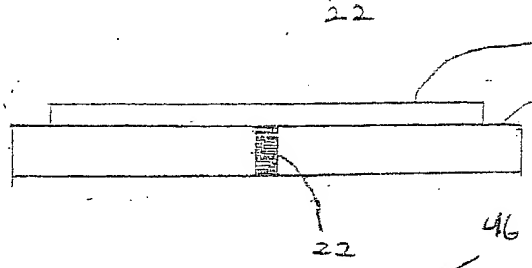


FIGURE 8E

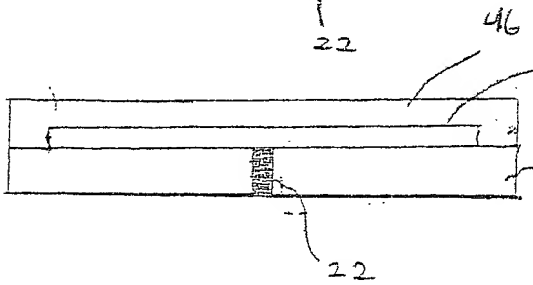


FIGURE 8F

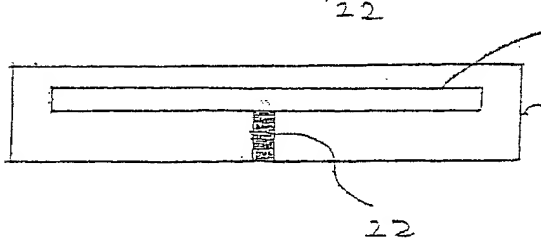


FIGURE 8G